

WHAT IS CLAIMED IS:

1. A method for formulating a plant nutrition, comprising steps of:
  - (a) providing a biopulp of a non-woody fiber plant;
  - (b) filtrating said biopulp for preparing a filtrate; and
  - (c) formulating said filtrate for preparing said plant nutrition.
2. The method as claimed in claim 1, wherein said biopulp is provided by steps of:
  - (a) providing a culture solution with a culture medium, said non-woody fiber plant and a suspension of a microorganism;
  - (b) fermenting said culture solution for preparing said biopulp.
3. The method as claimed in claim 2, wherein said non-woody fiber plant is pretreated by one selected from a group consisting of a relatively higher pressure treatment under a relatively higher temperature, a steamed treatment under a relatively higher temperature, a boiled treatment under a relatively higher temperature, a fumigatory treatment and a soaked treatment under a room temperature.
4. The method as claimed in claim 2, wherein said microorganism is one selected from a group consisting of a *Bacillus licheniformis* (PMBP-m5), a *Bacillus subtilis* (PMBP-m6) and a *Bacillus amyloliquefaciens* (PMBP-m7).
5. The method as claimed in claim 2, wherein said microorganism has an inoculation concentration ranged from 0 to  $10^8$  cfu / ml.
6. The method as claimed in claim 2, wherein said fermenting process is proceeded at a temperature ranged from 20 to 50 °C.
7. The method as claim in claim 2, wherein said fermenting process is proceeded over 0~10 days.

8. The method as claimed in claim 2, wherein said step (b) further comprises a step of boiling said biopulp for 25~40 minutes under 120~150 °C.
9. The method as claimed in claim 8, wherein said biopulp further comprises 0 ~ 4 % (w/v) CaO when being boiled.
10. The method as claimed in claim 1, wherein said biopulp is screened by 18~300 meshes.
11. The method as claimed in claim 1, wherein said filtrate is diluted by a volume of 10~100 times for being applied to a crop cultivation.
12. The method as claimed in claim 1 further comprising a step of adding an additive for preparing an improved plant nutrition, wherein said additive is one selected from a group consisting of a seaweed powder, an urea, an alcohol, a Hoagland's solution and a mixture thereof.
13. The method as claimed in claim 12, wherein said improved plant nutrition is diluted by a volume of 250~1000 times for being applied to a crop cultivation.
14. A method for formulating a plant nutrition, comprising steps of:
  - (a) providing a biopulp of a fiber plant;
  - (b) filtrating said biopulp for preparing a filtrate; and
  - (c) formulating said filtrate for preparing said plant nutrition.
15. The method as claimed in claim 14, wherein said biopulp is provided by steps of:
  - (a) providing a culture solution with a culture medium, said fiber plant and a suspension of a microorganism;
  - (b) fermenting said culture solution for preparing said biopulp.
16. The method as claimed in claim 15, wherein said fiber plant is a

non-woody fiber plant.

17. A formulated plant nutrition, comprising:
  - a filtrate of a biopulp of a non-woody fiber plant;
  - a nitrogen source;
  - an alcohol; and
  - a Hoagland's solution.
18. The formulated plant nutrition as claimed in claim 17 further comprising a polymer.
19. The formulated plant nutrition as claimed in claim 18, wherein said polymer is one selected from a group consisting of a seaweed powder, an alginic acid, an alginic salt, a polyelectrolyte, a corn wheat bran and a starch.
20. The formulated plant nutrition as claimed in claim 18, wherein when said filtrate is 100 parts by volume, said polymer is added thereto by a volume of 0.1~5 parts, said nitrogen source is added thereto by a volume of 0.01~1 parts, said alcohol is added thereto by a volume of 0.1~5 parts and said Hoagland's solution is added thereto by a volume of 0.1~5 parts.
21. The formulated plant nutrition as claimed in claim 17, wherein said nitrogen source is a urea.